

SOKHOTSKIY, Yu. V.

An Outstanding Mathematician of St. PETERSBURG p. 80

TRANSACTIONS OF THE 2ND REPUBLICAN CONFERENCE (ON MATHEMATICS AND MECHANICS  
(TRUDY VTOROY RESPUBLIKANSKoy KONFERENCE POb MATEMATIKE I MEKHANIKE), 184  
pages, published by the Publishing House of the AS KAZAKH SSR, ALMA-ATA, USSR, 1962

1. ZOKHARANICHEV, V.
2. USSR (600)
4. Insulation (Heat)
7. How to use boiler scale in building. Sel'. stroi. 2 no. 4 1947.
9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

ARKHIPOV, P.P., inzhener; IVANOV, Ye.D., inzhener; KRYLOV, N.V., inzhener-arkhitektor; NIKANDROV, B.I., inzhener-arkhitektor; NOSKOV, B.G., inzhener-arkhitektor; RYABTSEV, M.N., vetrach; SOKHREANICHEV, N.G., inzhener-arkhitektor; TSIBUL'SKIY, L.A., kandidat sel'skokhozyayatvennykh nauk; PIOTROVSKIY, M.I., inzhener, retsensent; VOL'FOVSKAYA, V.N., redaktor; FEDOTOVA, A.F., tekhnicheskiy redaktor.

[Handbook on the construction of farm buildings] Spravochnik po sel'skokhoziaistvennomu stroitel'stvu. Moskva, Gos. izd-vo selkhoz. lit-ry. (MLRA 8:2)  
Vol. 2. 1952. 579 p.

(Farm buildings) (Building)

ARKHANGEL'SKIY, P.Ye., inzhener; AREHIPOV, P.P., inzhener; VAS'KOV, M.P., agronom; ZHMUDSKIY, D.A., arkhitektor; IVANOV, A.P., arkhitektor; KIBIREV, S.T., arkhitektor; KRYLOV, N.V., inzhener-arkhitektor; KULAKOV, D.V., arkhitektor; MARTYNOV, P.F., inzhener; NIKIFOROV, V.S., inzhener; NOSKOV, B.G., arkhitektor; PETUKHOV, B.V., kandidat tekhnicheskikh nauk; RUDANOV, M.L., kandidat tekhnicheskikh nauk; RYAZANOV, V.S., kandidat arkhitektury; SOKHANICHEV, N.S., inzhener-arkhitektor; TARASOV, D.I., arkhitektor; SHMIDT, N.E., kandidat arkhitektury; KHOMUTOV, Ye.Ye., arkhitektor; VOL'FOVSKAYA, V.N., redaktor; FEDOTOVA, A. F., tekhnicheskiy redaktor.

[Handbook on the construction of farm buildings] Spravochnik po sel'skohozhivotvennomu stroitel'stvu. Avtorskii kollektiv: P.E. Arkhangel'skiy i dr., avtor-sost. N.V. Krylov. Moskva, Gos. izd-vo sel'khoz. lit-ry. Vol. 3 1955. 843 p. (Farm buildings) (MIRA 9:6)

SOVIRANOV, N.N., CHUKIN, V.T., and KOMAROV, S.G.

"Carrying Out of Electric Logging in Presence of Strong Erratic Currents" Prikl. Geofizika, 10., 1953, 36-47

Measurements of erratic currents were carried out in a well of the industrial district. The potential difference was taken between the surface electrode and the electrode sunken in the well. The difference increases with depth and may reach several volts. The distribution of the difference along the well axis depends on the specific resistivity of the layers. (RZhFiz, No 10, 1955)

SOKHRANOV, N.N.

Nonideal sondes used in electric logging. Prikl.geofiz. no.15:169-  
179 '56. (MLRA 10:1)  
(Oil well logging, Electric)

SOKHRENOV, N.N.

SOKHRENOV, N.N.; PIGROV, V.M.; AL'CHIBAYEV, P.A.

Operation of automatic logging station laboratories. Razved. 1  
(MLRA 10:8)  
prom. geofiz. no.16:11-16 '56.  
(Oil well logging)

15-57-5-6866

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5,  
p 163 (USSR)

AUTHOR:

Sokhranov, N. N.

TITLE:

Nonideal Sondes Used for Electrical Logging (O neideal'nykh zondakh, primenayemykh pri elektricheskem karottazhe)

PERIODICAL:

Prikl. geofizika, Nr 15, 1956, pp 169-179.

ABSTRACT:

A study of calculated and empirical (from measurements in drill holes) curves of apparent resistivity leads the author to conclude that the variation in apparent resistivity from values obtained on an ideal three-electrode potential sonde is determined by the value of the ratio  $\bar{A}N/d$ , but that the degree of distortion of the apparent-resistivity curve for strata of high resistivity depends on the value  $\bar{A}N/h$ , where  $d$  and  $h$  are, respectively, the diameter of the drill hole and the thickness of the stratum, and  $\bar{A}N$  is the distance between the extreme electrodes of the sonde. Curves

Card 1/2

SKHERA CV, N. I., Cand. Tech. Sci. -- (ciss) "Examination of transition zones of petroleum beds according to data provided by electrical core sampling," Moscow, 1960, 12 pp (All-Union Sci. Res. Institute of Geophysical Methods of Exploration - "VSEGIofizika") (KL, 37-60, 142)

SOKHRANOV, N.N.

Transition zone and the determination of the water-oil contact based  
on geophysical measurements. Geol. nefti i gaza 4 no.5:55-59 My '60.  
(MIRA 13:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh  
metodov razvedki.  
(Petroleum geology)

SOKHRANOV, N.N.

Studying the transition zone of pay strata from electric logging  
data. Prikl.geofiz. no.24:159-189 '60. (MIA 13:6)  
(Electric prospecting)

SOKHRANOV, N. N.

Quantitative interpretation of electric logs in the transition  
zone. Prikl. geofiz. no.27:158-170 '60. (MIRA 13:12)  
(Oil well logging, Electric)

KINSHAKOV, A.I.; SOKHRANOV, N.N.; SOLODUNOV, A.I.

Four-electrode tool used in electric logging. Prikl.geofiz.  
(MIRA 14:10)  
no.30:215-228 '61.  
(Electric prospecting)

SOKHRANOV, N.N.; GERASIMOV, N.N.

AKS-4 automatic logging laboratory. Razved. i prom. geofiz.  
(MIRA 16:11)  
no.42:95-146 '61.

AKSEL'ROD, S.M.; SOKHRANOV, N.N., nauchnyy red.; KRAVCHENKO, M.D.,  
red.; BORUSHKO, T.I., red.izd-va; SHMAKOVA, T.M., tekhn.  
red.

[High-frequency methods for studying boreholes; induction and  
dielectric logging] Vysokochastotnye metody issledovaniia  
skvazhin (induktsionnyi i dielektricheskii karotazh). Moskva,  
Gosgeoltekhnizdat, 1962. 31 p.  
(Oil well logging, Electric)

KOMAROV, S.G.; PETROSYAN, L.G.; PER'KOV, N.A.; FEL'DMAN, I.I.;  
DUNCHENKO, I.A.; KORZHEV, A.A.; SOKHRANOV, N.N.;  
CHUKIN, V.T.; BASIN, Ya.N.; KARGOV, F.A.; MUKHER, A.A.;  
FEDOROVA, L.N., red.; BYKOVA, V.V., tekhn. red.

[Technical instructions on conducting geophysical explorations in boreholes] Tekhnicheskaiia instruktsia po provedeniu geofizicheskikh issledovanii v skvazhinakh. Moskva, Gosgeoltekhnizdat, 1963. 297 p. (MIRA 17:2)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy geologicheskiy komitet. 2. Kollektiv rabotnikov sektora promyslovoi geofiziki Vsesoyuznogo nauchno-issledovatel'skogo instituta geofizicheskikh metodov razvedki (for Komarov, Petrosyan, Per'kov, Fel'dman, Dunchenko, Korzhev, Sokhranov, Chukin, Basin). 3. Strudniki Otdela geofiziki Gosudarstvennogo geologicheskogo komiteta SSSR (for Kargov). 4. Glavnoye upravleniye geologii i okhrany nedr pri Sovete Ministrov RSFSR (for Mukher).

IL'INA, T.D.; KULINKOVICH, A.Ye.; PER'KOV, N.A.; SOKHRANOV, N.N.

Present status of and prospects for the development of the  
interpretation of geophysical data on boreholes using computers.  
Sov. geol. 6 no.5:121-125 My '63. (MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizi-  
cheskikh metodov razvedki.  
(Logging(Geology)--Electronic equipment)  
(Electronic computers)

SOKHANOV, N.N.

Layers with low resistivity. Prikl. geofiz. no.36:219-232  
'63. (MIRA 16:9)  
(Oil well logging, Electric)

MAKARENKO, I.P. (Leningrad); SOKHRANSKAYA, V.S. (Leningrad); SHAKHBAZYAN, K.V.  
(Leningrad)

Master plan for computer programming. Zhur. vych. mat. 1  
mat fiz. 3 no.6:1134-1137 '63. (MIRA 17:1)

SIDEL'NIKOV, V.V.; SOKHRANSKIY, A.S.

Experimental study of high-frequency corona interference on round  
conductors with a clean surface. Sbor. rab. po vop. elektromekh.  
no.5:251-262 '61. (MIRA 14:6)

(Corona (Electricity)  
(Radio--Interference)  
(Telephone lines)

PEREL'MAN, L.S.; SOKHRANSKIY, A.S.

Comparative measurements of radio interference generated by an  
experimental overhead power transmission line carrying d.c. and  
a.c. power. Izv. NIIPT no.9:133-143 '62. (MIRA 15:12)  
(Electric lines—Overhead) (Radio—Interference)

MOROZOV, Yu.A.; SOKHRANSKIY, A.S.

Characteristics of a high-frequency relay protection channel for 35  
kv. cable networks. Sbor. rab. po vop. elektromekh. no.9:324-331 '63.  
(MIRA 17:2)

SOKHRAWSKIY, S. T.

"Production of Cable Equipment," "Operation of Cable Networks" (Eksplotatsiya kabeley i kabel'nykh setey), Gosenergoizdat, 1949, 384 pp.

SOKHRANSKIY, S.

What should working drawings of the longitudinal section and  
construction plan of automobile roads be like? Avt.transp. 32  
no.3:18-19 Mr '54. (MLRA 7:8)

1. Soyuzdoprojekt.  
(Roads)

SOKHRANSKIY, S.T.:

Bring scientific research work closer to the needs of road construction. Avt.dor. 19 no.9:2-3 S '56. (MLRA 9:11)

1. Glavnyy inzhener US-17 Glavdorstroya SSSR.  
(Road construction)

SOCHRAMSKY, S.T., inzhener.

Roadbeds made of cemented sand and gravel soils. Avt. dor. 20 no.4:  
4-6 Ap '57. (MIRA 10:5)

(Road construction)

SOKHRAŃSKIY, S.T., inzh.

Constructing roadbeds for asphalt concrete roads under cold  
weather conditions. Avt. dor. 21 no.2:4-5 F '58. (MIRA 11:2)  
(Road construction--Cold weather conditions)

KARATAYEV, G.S.; SOKHRANSKIY, S.T.

In the fight for early fulfillment of the production plan. Avt.dor.  
21 no.11:10-12 N°58. (MIRA 11/12)

1. Nachal'nik Upravleniya No.17.  
(Road construction)

SOKHRANSKIY, S.T., inzh.

Constructing bed top layers for roads with mixer-made asphalt  
concrete black gravel surfaces (third asphalt concrete layer).  
Trudy MADI no.23:185-190 '58. (MIRA 12:1)  
(Pavements, Concrete) (Road construction)

8(3)

SOV/28-59-3-17/25

AUTHORS: Sokhranskiy, S.T., and Branzburg, Ye.Z., Engineers

TITLE: The Standardization of Cable Joints for 6 and 10 kv Power Cables (Standartizatsiya soyedinitel'nykh muft dlya silovykh kabeley na 6 i 10 kv)

PERIODICAL: Standartizatsiya, 1959, Nr 3, pp 49 - 51 (USSR)

ABSTRACT: A new joint for 6 and 10 kv cables with paper insulation has been developed by Nauchno-issledovatel'skiy institut kabel'noy promyshlennosti (Scientific Research Institute of Cable Industry) that eliminates the deficiencies of the cable joints now used in the Moscow cable network (10 kv) and the Leningrad cable network (6 kv). The information includes a diagram (Figure 3) and a description of the assembling: with stepped removal of insulation on the cable cores and the use of 5 mm, 10 mm, and 200-250 mm insulation tape. The electric strength of the joints is equal to that of the cables. The assembly instruction for

Card 1/2

BRANZBURG, Ye.Z.; GORNOVA, I.S.; SOKHRANSKIY, S.T.; ZAV'YALOV, V.P.,  
red.; BORUNOV, N.I., tekhn. red.

[Technical documentation of cable jointing sleeves] Tekhnicheskaya dokumentatsiya na kabel'nye mufty. Moskva, Gos.energ. izd-vo. No.12 [Pole boxes for SB, AB, and AAB cables with saturated paper insulation carrying 1, 6, and 10 kv.] Machtovye mufty dlia kabelei s bumazhnoi propitannoj izoliatsiei tipov SB, AB i AAB na napriazhenie 1, 6 i 10 kv. 1961. 71 p. (MIRA 15:2)  
(Electric lines--Overhead) (Electric cables)

SOKHRANSKIY, S.T., inzh.; LIKHACHEV, V.P., inzh.; KHROMCHENKO, G.Ye.,  
inzh., nauchnyy red.; AZRILYANT, Ya.M., red. izd-va; OSENKO, L.M.,  
tekhn. red.

[Installation of electric cables] Montazh kabel'nykh linii. Mo-  
skva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam,  
1961. 325 p.  
(MIRA 14:8)

1. Russia(1917- R.S.F.S.R.) Glavnaya upravleniya po proizvodstvu  
elektromontazhnykh rabot.  
(Electric cables)

BRANZBURG, Yelena Zinov'yevna; SOKHRANSKIY, Sergey Timofeyevich; KHROMCHENKO,  
G.Ye., inzh., red.; BORUNOV, N.I., tekhn.red.

[Installation of cable joints for lines with voltage ratings up to  
35 kv.] Montazh kabel'nykh muft na napriazhenie do 35 kv. Moskva,  
Gos.energ.izd-vo, 1961. 359 p.  
(MIRA 14:7)  
(Electric cables)

GLUZDOVSKIY, S.M.; SOKHRANSKIY, S.T.; GORNOVA, I.S.; MARKINA, V.A.;  
KAPLAN, A.A.; NAYFEL'D, A.M.; SOKOLOVA, M.P., red.;  
ZOLOTAREVA, M.A., red.; LARIONOV, G.Ye., tekhn. red.

[Technical documentation on cable jointing sleeves] Tekhnicheskaya dokumentatsiya na kabel'nye mufty. Moskva, Gosenergoizdat. No.14. [Jointing sleeves and termination of three-wire 1 kv. cables with aluminum sheathing used as common neutral wire (fourth strand)] Mufty i zadelki na trekhzhil'nykh kabeliakh s aluminievoy obolochkoy na napriazhenie 1 kv pri ispol'zovanii obolochki v kachestve nulevogo rabochego провода (chetvertoi zhily). 1963. 55 p. (MIRA 16:9)

1. Nauchno-issledovatel'skiy institut kabel'noy promyshlennosti (for Markina). 2. Moskovskoye proyektno-eksperimental'noye otdeleniye Gosudarstvennogo proyektnoy instituta tyazheloy elektricheskoy promyshlennosti (for Nayfel'd).  
(Electric cables)

SOKHRANSKIY, Sergey Timofeyevich, inzh.; KHROMCHENKO, Grigoriy  
Yefimovich, inzh.; SMIRNOV, L.P., red.; LARIONOV, G.Ye.,  
tekhn. red.

[Epoxide cable jointing sleeves and sealings] Epoksidnye  
kabel'nye mufty i zadelki. Moskva, Gosenergoizdat, 1963.  
86 p. (Biblioteka elektromontera, no.115) (MIRA 17:4)

SOKHRAWSKIY, S.T.; BELYAYEV, B.Ye.

Increase the amount of construction work completed in winter.  
Avt. dor. 28 no.12:3-5 D '65. (MIRA 19:1)

SOKHRIN, Ye.Yu.

Cybernetics is coming to the oil fields. Neftianik 7 no.7:19-21  
Jl '62. (MIRA 16:3)  
(Cybernetics) (Automatic control) (Oil fields--Electronic equipment)

36-64-1/7

AUTHOR: Sokhrina, R. F.

TITLE: Mapping Strong-Wind Days for Central Parts of European USSR and Areas of Virgin and Fallow Lands (Opyt postroyeniya kart chisla dney s sil'nym vетром dlya tsentral'nykh oblastey yevropeyskoy chasti Soyuza i rayonov osvoyeniya tselinnykh i zalezhnykh zemel')

PERIODICAL: Trudy Glavnay geofizicheskoy observatorii, 1956, Nr 64, pp 5-12 (USSR)

ABSTRACT: Strong winds (over 15/m per sec) cause considerable damage in the economy of the USSR, so that it is desirable to outline the areas affected by them. Sokhrina discusses the close relationship between climatic and physico-geographical characteristics, and the complexity of evaluating meteorological phenomena. She points out the practical application of building up average values based on observations which are often not sufficiently accurate or uniform, or obtained from observatories located at random distances from each other. The enclosed maps illustrating the areal distribution of strong winds may be of great practical value. Authors O. A. Drozdov, and V. Yu. Milevskiy are mentioned. There are 2 figures, 4 maps and 1 Soviet reference.

AVAILABLE: Library of Congress.

Card 1/1

Hail on Soviet Territory

36-74-1/5

Tabular material in the article covers the following topics: influence of plateaus and mountains on the precipitation of hail, influence of the large water bodies (Sea of Azov, Lake Baikal, etc.) on hail, diurnal and annual hail, average duration of hail. The author concludes that hail occurrence increases with elevation and decreases in the vicinity of larger water bodies. About 60 percent of hail occurs between 1 and 7 o'clock p.m.; 50 percent of hail lasts less than 5 minutes; 30 percent lasts between 5 and 20 minutes. The author summarizes information on the amount of hail fall in various places of the Union (331 localities are listed) and assigns it to definite months. There are 4 tables, 1 map, (2 in appendix) and 4 Soviet references.

AVAILABLE: Library of Congress (QC 801. I46)

Card 2/2

MM/vm  
6-9-58

S/169/62/000/006/053/093  
D228/D304

AUTHOR: Sokhrina, R. F.

TITLE: Sunshine on the USSR's territory

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 6, 1962, 15, abstract 6B120 (Tr. II Vses. konferentsii po svetovomu klimatu, M., Gosstroyizdat, 1961, 60-67)

TEXT: A series of maps was constructed on the basis of multiyear observations of the sunshine duration at 735 meteorologic stations in the USSR. It includes: 1) the sunshine duration in hours, 2) the sunshine duration in relation to the possible, and 3) the number of days with no sun. The sunshine duration maps are given in three versions: for the whole year and for two months -- July and December. Maps of the sunshine duration with respect to the possible are presented, too, for July and December. Maps of the number of days with no sun are given for the whole year and for July and December. The maps enable the sunshine duration and the number of sunless days throughout the USSR's territory to be determined.

- / abstracter's note: Complete translation. ]

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"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001651920013-3

Proposed by: G. J. P. P. P.

Proposed regime of Antarctica. Profile analysis of the proposed  
regime.

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001651920013-3"

1954, p. and D.O. , S.

"Apparance and Development of Chemical War regulation in Central Europe  
(Citellus Citellus)" p. 12  
(IAS, Vol. 3, no. 3, 1953, Beograd, Yugoslavia)

10: Monthly List of East European Accessions, IJ, Vol. 3, no. 5, May 1954/Uncl.

Sokic, P.

11/10 ✓ Experimental hypothermia and the toxicity of carbon monoxide and strychnine. J. Glaja, L. Marković-Glaja, and P. Sokic (Univ. Belgrade). *Compt. rend. soc. belg. 149, 447-9 (1955).* When a rat is cooled to an internal temp. of about 20° it assumes the characteristics of a poikilotherm rather than a homeotherm and its resistance to poisons such as CO and strychnine is greatly increased. Upon warming to approx. 23° it again becomes a homeotherm and its susceptibility to these poisons is the same as at normal body temp.

L. B. Gilson

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GJAJA, Ivan; MARKOVIC-GJAJA, Leposava; SOKIC, Pavle

Hypothermia and toxicity of strychnine and carbon monoxide.  
Glas Srpske akad. nauka, odelj. med. 217 no.10:79-84 1956.

1. Fizicloski zavod Prirodno-matematičnog fakulteta Univerziteta  
u Beogradu.

(HYPOTHERMIA, effects,  
on strychnine & carbon monoxide tox. (Ser))

(STRYCHNINE, toxicity,  
eff. of hypothermia in rats (Ser))

(CARBON MONOXIDE, toxicity,  
eff. of hypothermia in rats (Ser))

SOKIC, S.

The construction of aerodynamic tunnels for meteorologic purposes.  
p. 40

YUGOSLAVIA. HIDROMETEOROLOSKA SLUZBA. VESNIK. Beograd, Yugoslavia.  
Vol. 7, no. 1/2, Jan./June 1958

Monthly List of East European Accession (EEAI) LC, Vol. 8, no. 6  
June 1959  
Uncl.

MILOJCIC, Bozna, prof. dr.; KRAJINOVIC, Slobodan, doc. dr.; UDICKI, Slavka, doc. dr.; SOKIC, Slobodanka, dr.; NASTASOVIC, Milena, dr.; MARIC, Radmila; OBRADOVIC, Mirjana, dr.

Role of collective immunity to spontaneously occurring diphtherial pathogens. Med. glas. 19 no.8/9:218-220 A<sub>6</sub>-3 '65.

1. Epidemioloski institut Medicinskog fakulteta u Beogradu (Upravnik: prof. dr. B. Milojcic).

L 37002-65 JK  
ACC NR: AP6029584

SOURCE CODE: YU/0015/65/000/08-/0218/0220

AUTHOR: Milojcic, Bozena (Professor; Doctor); Krajinovic, Slobodan (Docent; Doctor); Udicki, Slavka (Docent; Doctor); Sokic, Slobodanka (Doctor); Nastasovic, Milena (Doctor); Maric, Radmila (Doctor); Obradovic, Mirjana (Doctor)

ORG: Department of Epidemiology, Medical Faculty/headed by Professor, Doctor B. Milojcic/, Belgrade (Epidemioloski institut Medicinskog fakulteta) 30 33

TITLE: Effect of collective immunity on spontaneous circulation of the diphtheria pathogen 0

SOURCE: Medicinski glasnik, no. 8-9, 1965, 218-220

TOPIC TAGS: public health, respiratory system disease, immunology, bacterial disease

ABSTRACT: Data show that it is only the severely toxic strain of Corynebacterium diphtheriae that has been reduced in incidence by vaccinations and antibiotics; the less virulent strains are as widespread as they ever were; this brings up many questions as to true condition of public health safety in this important area. Doctor R. Novicic, V. Miljkovic, Senior Medical Technician, and M. Subarevic, Medical Technician participated in this work. Orig. art. has: 1 table. [JPRS: 36,599]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 005

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YUGOSLAVIA

MILOJCIC, Bozena; SOKIC, Slobodanka; MARIC, Radmila; NASTASOVIC, Milena; ORBADOVIC, Mirjana, Krajinovic, Slobodan; and UDICKI, Slavka, Department of Epidemiology of Medical Faculty of the University (Epidemioloski institut Medicinskog fakulteta Universiteta), Head (Upravnik) Prof. Dr. Bozena MILOJCIC; Belgrade

"Patterns of Diphtheria Carrier States in Vaccinated Children"

Belgrade, Srpski Arhiv za Celokupno Lekarstvo, Vol 9, No 2; 1966; pp 105-111

Abstract: [English summary modified] Despite obligatory vaccinations since 1952, continuous sporadic cases of diphtheria among Yugoslav children show poor state of immunity among 576 children examined with 3886 throat swabs; 14 carriers were found, also 6 adult ones. All strains of *Corynebacterium diphtheriae* were represented. 7 tables, 1 Yugoslav reference. Manuscript received 9 Nov 65.

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- 9 -

REZNIK, I.D.; SHERMAN, B.P.; SOKIN, B.G.

Starting the operation of a KT-100 oxygen plant in the  
Southern Urals Nickel Combine. TSvet. met. 29 no.10:34-  
38 0 '56. (MLRA 9:12)

1. Gintsvetmet Kombinat Yuzhuralinkel'.  
(Ural Mountain region--Nickel--Metallurgy)  
(Oxygen)

SOKIN, O.P., kand. tekhn. nauk

Series of the Canadian "Nodwell" tractors and transporters.  
Trakt. i sel'khozmash. no. 5:40-43 My '65. (MIRA 18:6)

1. Gosudarstvennyy soyuznyy nauchno-issledovatel'skiy traktornyy  
institut.

SOKINA, D. A., TROITSKY, G. V. (USSR)

Isolation of Substances Causing a- and b-Globulinization of the Plasma Proteins of  
the Heart from Perfusate of the Functioning Heart.

report presented at the 5th Int'l.  
Biochemistry Congress, Moscow, 10-16 Aug. 1961

SOKIRKO A.

32-6-50/54

AUTHOR

SOKIRKO, A.  
On Sample Ingots for the Testing of "Rockwell" Apparatus .  
(Ob obraztsovykh bruskakh dlya proverki priborov "Rokwell" - Russian)  
Zavodskaya Laboratoriya, 1957, Vol 23, Nr 6, pp 765 - 765 (U.S.S.R.)

TITLE

PERIODICAL

ABSTRACT

The following information is given in reply to the enquiry published in ZA 1957, Vol 23, Nr 6, pp 765:  
Within the system of the Soviet Ministry for apparatus construction and automatics sample blocks TK for harness testing (with which the degree of hardness is determined by pressing in the diamond cone) of the TSH type (where the degree of hardness is determined by means of a steel ball) are produced by the Moscow Experimental Works Glavtoch mash. Production is being continually increased. Thus, 540 sets of TSH ingots and 1370 sets of TK test ingots were produced. This production was increased within one year to 1230 TSH and 2430 of TK test ingots. In 1957 it is intended to produce 4000 sets of TSH and 5000 sets of TK blocks.  
Industrial plants and organisations interested in this production will obtain the necessary information and technical data by applying to the following address- Moscow, V-26, Kholodil'nyy peryeulok 1.

ASSOCIATION

A.Sokirko, Manager of the Moscow Experimental Plant for Testing Machines and Scales.

PRESENTED BY

SUBMITTED

AVAILABLE

Card 1/1

Library of Congress.

BREYGER, I.I.; SOKIRKIN, A.I.

Automation of the DMK-0,25 furnace with manual placement of  
electrodes. Energ. i elektrotekh. prom. no.1:67-68 Ja-Mr  
'63. (MIRA 16:5)  
(Electric furnaces)

MOROZOV, V.N., inzh.; BABASKIN, Yu.Z., inzh.; TUFOVSKII, V.P., inzh.;  
SOKIRKO, L.A., inzh.; MOSKALENKO, A.F., inzh.; MURAV'YEV, V.N., inzh.

Obtaining compact stainless steel castings. Mashinostroenie  
(MIRA 18:6)  
no. 3:29-30 My-Je '65.

ACC NR: AT7000963

SOURCE CODE: UR/0000/66/000/000/0056/0062

AUTHOR: Fiksen, N. V. (Candidate of technical sciences); Sokirko, L. A.; Murav'yev, V. I.

ORG: Institute of Casting Problems, AN UkrSSR (Institut problem lit'ya AN UkrSSR);  
Donetsk Institute of Ferrous Metals (Donetskiy institut chernykh metallov)

TITLE: Treatment of 1Kh18N9TL stainless steel with boron and cerium and their effect on the  
nature and distribution of nonmetallic inclusions

SOURCE: AN UkrSSR. Poroki stal'nykh otlivok i metody ikh ustraneniya (Defects in steel  
castings and methods of their elimination). Kiev, Naukova dumka, 1966, 56-62

TOPIC TAGS: stainless steel, boron, cerium, nonmetallic inclusion / 1Kh18N9TL stainless  
steel

ABSTRACT: Proceeding from the premise that the nature and pattern of distribution of non-  
metallic inclusions in various types of steels may be favorably affected by treating the steels  
with small amounts of special elements such as B and Ce, the authors added 0.001, 0.003,  
0.005, and 0.007% B in the form of ferroboron (11.2% B) and 0.1, 0.2, 0.4 and 0.6% Ce in the  
form of ferrocerium (95.8% rare-earth metals) to ladles containing 50 kg of 1Kh18N9TL stain-

Card 1/2

ACC NR: AT7000963

less steel teemed from 400-kg basic-lined induction furnace, as well as directly to the furnace melt. After this specimens were cast in the shape of cylinders and their sections were subjected to metallographic and petrographic analysis (the latter with respect to nonmetallic inclusions). Findings: On addition of more than 0.003% B to 1Kh18N9TL steel nonmetallic inclusions of "sludging" type are no longer observed in this steel. The chains of titanium sulfides running along the grain boundaries in this steel disappear when it is treated with 0.005% B. In this case the titanium sulfides are represented by a few isolated inclusions with a mean size of 0.015-0.020 mm. As the amount of B added to the stainless steel is increased, the inclusions of titanium nitrides and oxides increase in size; then the number of disperse inclusions decreases. When more than 0.005% B is added to 1Kh18N9TL steel, a phase with a bright glitter may be observed in the form of isolated chains running along grain boundaries. Apparently this phase represents a boron carbide. The addition of Ce, while it somewhat increases the contamination of stainless steel by nonmetallic inclusions, assures a sufficiently uniform distribution of these inclusions. If 0.1% Ce is added, chains of titanium sulfides are absent along grain boundaries. Cerium treatment of 1Kh18N9TL steel while it still is in the furnace and addition of B to the ladle prior to pouring assure an extremely uniform distribution of nonmetallic inclusions and markedly reduce the overall contamination of the metal. Orig. art. has: 4 figures.

SUB CODE: 13, 11, 20/ SUBM DATE: 23Jul66

Card 2/2

NIKOLAYEV, V. M., SOKIRKO, L. Ye., PESTOVA, N. M.

Using the spectrum analysis for correlating formation waters  
of Mesozoic sediments in eastern Ciscaucasia. Trudy Groz. NII  
no.8:200-214 '60. (MIRA 13:8)  
(Caucasus, Northern--Water, Underground)  
(Spectrum analysis)

SOKIRKO, T.S.

International forum of mining engineers. Razved. i okh. nedr.  
30 no.8:61-62 Ag '64. (NRA 17:10)

1. TSentral'nyy Komitet professional'nogo soyuza rabochikh geologorazvedochnykh rabot.

L 63847-65 EPA/EWP(f)/EPF(n)-2/T-2/ETC(m) WW

ACCESSION NR: AF5018519

UR/0304/65/000/004/0034/0036  
662.761

AUTHOR: Sokirko, V. S. (Engineer)

TITLE: Gas turbine unit for oil pipelines

SOURCE: Mashinostroyeniye, no. 4, 1965, 34-36

TOPIC TAGS: gas turbine, pipeline/ OR 95 gas turbine, GT 700 5 gas turbine, GTUN 9  
gas turbine, Sigma gas turbine

ABSTRACT: Theoretical and practical work concerning floating piston gas generators is being performed at the Luganskiy teplovozostroitelnyy zavod im. Oktyabr'skoy revolyutsii Donetskogo sovnarkhoza (Lugansk Diesel Locomotive Plant of the Donetsk Sovnarkhoz). Model OR-95 has been completed. It can be operated on DS diesel oil, DT-1 engine oil, thermocracking oil distillation products, and on crude oil. The same plant builds gas turbines of 3000 hp for locomotives and of 1850 hp for river boats. The State Interdepartmental Commission has accepted a 3700 hp unit for an oil pipeline. This unit consists of 7 generators OR-95 (one as standby), auxiliary equipment, a five-step reaction turbine of 3700 hp, 6000 rpm with a one-stage 1:2 gear reducer connected to the oil pump (total weight 6500 kg). The oil pump 24ND-1/px1 has a capacity of 4000 m<sup>3</sup>/hr at a pressure of 216 m column of Card 1/2

L 63847-65

ACCESSION NR: AP5018519

the pumped liquid and at 2980 rpm. Its weight is 5840 kg, and its efficiency is 31.7%. Similar units were also tested: model GT-700-5 of the Neva Machine Factory had an efficiency of 25% at 5780 hp, model GTUN-9 of the Leningrad Metal Factory -- 26% at 12 240 hp, and the French "Sigma" -- 33% efficiency at 4000 hp. The controls of the Lugansk unit are adequate, its construction is simple, and no trained personnel are required. Starting time of the cold unit is 26 minutes, of warm unit -- 10 minutes. The shunting-in of the stand-by gas generator takes 2-3 minutes. Orig. art. has: 1 photograph and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: PR

NO REF Sov: 000

OTHER: 000

dm  
Card 2/2

12250

S/126/62/014/004/017/017  
E073/E535

18.7.80  
18.12.85

AUTHORS: Mozhayev, S.S., Sokiryanskiy, L.F. and Anitov, I.S.

TITLE: On the mechanism of high-temperature oxidation of  
titanium

PERIODICAL: Fizika metallov i metallovedeniye, v.14, no.4, 1962,  
627-638

TEXT: G. Wallwork and A. J. Jenkins (J.Electrochem. Soc.,  
1959, 106, (1), 10) explain the transition from the parabolic law  
of oxidation to the linear law by means of the hypothesis  
according to which the rate of oxidation is controlled by the  
gradient of oxygen concentration in the metallic base of the  
specimen and he assumed that, at the end of the parabolic oxidation  
period, the gradient reaches a steady-state value and, as a result,  
the rate of oxidation remains constant. J. Stringer (Acta met.,  
1960, 8, 11, 758) found that during oxidation at 950°C according  
to the parabolic law about 45% of the entire oxygen absorbed by the  
titanium is dissolved in the core of the specimen, whilst at the  
end of the linear oxidation section only 5% is dissolved.  
Analysis of experimental data available to the authors of this

Card 1/3

On the mechanism of high-temperature ... S/126/62/014/004/017/017  
E073/E535

paper indicates that during transition from the parabolic to the linear oxidation law, the rate of scale formation increases appreciably but no appreciable changes were found in the kinetics of dissolution of oxygen in the metal. Due to the increased rate of scale formation, the ratio between the quantity of oxygen which is chemically combined and the oxygen which is dissolved in the metal changes. However, since in the "linear" range the absolute quantity of the oxygen dissolved in the metal continues to increase with the progress of time, the depth of penetration of the oxygen into the titanium must increase. This was confirmed by microhardness measurements of specimens which were subjected to oxidation at 900°C for periods between 0.5 and 16 hours. Some of the specimens were exposed to oxidation over a long period so as to ensure transition into the linear range, after which the scale was removed and the specimens were subjected to a second oxidation at the same temperature. If the gradient of oxygen concentration in the metallic core would be the factor controlling the rate of oxidation, the repeated oxidation would have to proceed in accordance with the linear law. However, the new curves of the

Card 2/3

MOZHAYEV, S.S.; SOKIRYANSKIY, L.F.

Kinetics of oxygen dissolution in titanium. Titan i ego splavy no.10:  
131-143 '63. (MIRA 17:1)

MOZHAYEV, S.S.; SOKIRYANSKIY, L.F.

Methods for calculating diffusion coefficients in two-phase systems. Inzh.-fiz. zhur. 6 no. 9:80-86 S '63.  
(MIRA 16:8)

L 14316-65 EPF(n)-2/EWT(m)/EWP(b)/EWP(t) Pu-4 DIAAP/ASD(f)-2/  
ASD(m)-3 JD/JG/MLK S/0000/64/000/000/0109/0114  
ACCESSION NR: AT4048058

AUTHOR: Shinyayev, A. Ya., Akopyan, V. O., Sokiryanskiy, L. F., Bogolyubova, I. V.

TITLE: Determination of the characteristics of mutual diffusion of titanium and molybdenum according to the attenuation of gamma radiation

SOURCE: Soveshchaniye po metallurgii, metallovedeniyu i primeneniyu titana i yego splavov. 5th, Moscow, 1963. Metallovedeniye titana (Metallography of titanium); trudy\* soveshchaniya. Moscow, Izd-vo Nauka, 1964, 109-114

TOPIC TAGS: molybdenum diffusion, gamma ray attenuation, interdiffusion coefficient, interdiffusion energy, titanium diffusion, titanium alloy

ABSTRACT: The interlocking of molybdenum with titanium or its alloys was determined by recording the attenuation of gamma irradiation during passage through various parts of the diffusion zone. Annealed Ti and the Mo specimen were pressed together, followed by annealing at various temperatures (905-1210C) for 7-240 hours. From a typical curve of a specimen annealed at 1100C for 40 hours it may be seen that the irradiation intensity decreased by a factor of 15 during passage. The formula relating the relative radiation intensity to the initial value and to the concentration of the components in the

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ACCESSION NR: AT4048058

binary system is presented. This is transformed to yield an equation for titanium concentration as determined by the intensity of the rays as they pass through each part of the specimen:

$$c_{Ti}(x) = 200 \frac{10.11 - \sqrt{104.2 - \frac{1}{b} \ln \frac{I(x)}{I_{Ti}}}}{28.01 - \sqrt{104.2 - \frac{1}{b} \ln \frac{I(x)}{I_{Ti}}}} \quad (1)$$

where  $c_{Ti}$  is the titanium concentration,  $x$  - the position of micro-part to be analyzed, relative to the diffusion zone,  $b$  - the thickness of the specimen in cm, and  $I$  - the intensity of radiation in counts/min. The diffusion constants were calculated by statistical estimation (straightening of the experimental concentration curve). The results of this calculation showed that at concentrations of 50-90 at. % Ti the coefficient of mutual diffusion  $D_{md}$  remains practically constant for a given temperature. Only at

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ACCESSION NR: AT4048058

concentrations of 90-98 at. % Ti was a significant increase in this coefficient observed. In the molybdenum range (100-50% Mo), the value of  $D_{md}$  was independent of the Mo concentration. The interdiffusion energy was found to be 41 Kcal/mole,  $D_0$  at about  $5.6 \cdot 10^{-3} \text{ cm}^2/\text{sec}$ . The rays passing through the Mo region were attenuated so much that the accuracy of the  $D_{md}$  value was decreased considerably. The activation energy was much higher here than in the Ti region. These results agree with earlier findings for small amounts of Mo. As the temperature increased from 905 to 1210°C, the coefficient of mutual diffusion ( $\text{cm}^2/\text{sec}$ ) increased from  $1.5$  to  $55 + 10^{-10}$  in the titanium zone and up to  $2.8 \cdot 10^{-8}$  in the molybdenum zone. "The authors wish to thank Professor S. S. Mozhayev, Doctor of Technical Sciences, for his assistance with the mathematical part of the work; L. G. Maksimova also helped with the calculations." Orig. art. has: 6 formulas, 7 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 15Jul64

NO REF SOV: 001

ENCL: 00

OTHER: 004

SUB CODE: MM

Card 3/3

SOFIYEVSKII, I.P.; SHVYDSEV, A.N.

Kinetics of the inflow of impurities to discharge plasma in  
a hot hollow cathode. Sov. lab. 31 no.1:54-56 '65.  
(KRA 18:3)

I. Institut metallurgii imeni Baykova.

ACC NR: AT6012368

SOURCE CODE: UR/0000/65/000/000/0043/0047

AUTHORS: Shinyayev, A. Ya.; Sokiryanskiy, L. F.; Ditsman, S. A.; Kupriyanova, T. A.

ORG: none

TITLE: Mutual diffusion of components and the phase diagram of the system Ti-W

SOURCE: Soveshchaniye po metallokhimii, metallovedeniyu i primeneniyu titana i yego splavov, 6th. Novyye issledovaniya titanovykh splavov (New research on titanium alloys); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 43-47

TOPIC TAGS: titanium, tungsten, alloy phase diagram, metal diffusion

ABSTRACT: The mutual diffusion of titanium and tungsten was studied over the temperature interval of 1000--1600°C. The experimental procedure was described in an earlier publication by A. Ya. Shinyayev, V. V. Bondarev, and Ye. V. Sergeyeva (Sb. Metallovedeniye titana, Trudy 5-go soveshchaniya po titanu. Izd-vo Nauka, 1964, str. 289). The experimental results are presented graphically (see Fig. 1). It is concluded that the system Ti-W exhibits a two-phase region up to the melting point temperature of the alloys. From a perusal of literature data on the diffusion and solubility of other metals in titanium, it is concluded that tungsten belongs to that class of elements which exhibits only partial solubility in titanium.

Card 1/2

L 39785-66

ACC NR: AT6012368

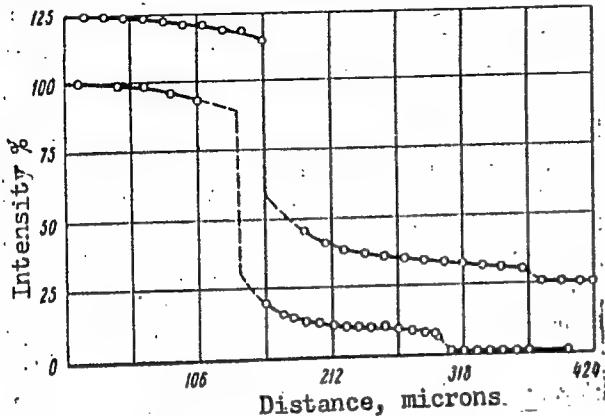


Fig. 1. Intensity of tungsten radiation (line  $L_d$ ) in the diffusion zone Ti-W. (Annealed at 1280°C for 6 hours; for convenience, curves derived from different regions of polished section are displaced with respect to each other.)

Orig. art. has: 1 table and 5 figures.

SUB CODE: 11/

SUBM DATE: 02Dec65/

ORIG REF: 003/ OTH REF: 005

Card 2/211/LP

SOKK, V. V. and KAZIN, L. D.

"Prospects for a New Vaccine Against Anthrax in Agriculture Animals (First Report)",  
Tr. Chkalovskogo S.-X. In-ta, No 6, 1953, pp 97-100

From a virulent strain of anthrax the authors produced a non-virulent culture by controlled culturing. It retained the morphological and biochemical properties of the original strain but lost its capacity for encapsulation and almost stopped sporulating. The new characteristics of the culture are stably maintained and transmitted hereditarily. Experiments with guinea pigs proved that the virulent culture had immunogenic properties. (RZhBiol, No 6, 1955) SO: Sum. No. 713, 9 Nov 1955

Sokk, N.V.

The chemical nature of crystals formed during the cultivation of certain pathogenic microorganisms. Ya. P. Bar-  
menkov and N. V. Sokk. Trudy Chkalov. Sel'skokhoz. Inst. 1955,  
6, 105-13(1953); Referat. Zhur. Khim., Biol. Khim. 1955,  
No. 943.—The crystals consisted of  $MgNH_4PO_4 \cdot 6H_2O$ .  
B. S. Levine

BEKTEMIROV, T.A.; SOKKAR, I.M.

Comparative study of the strains of atypical fowl plague, (New-  
castle disease) virus of varying virulence in chicken embryo  
tissue cultures. Vop. virus. 8 no.3:330-335 My-Je'63.

(MIRA 16:10)

1. Tsentral'nyy institut usovorshenstvovaniya vrachey, Vse-  
soyuznyy institut eksperimental'noy veterinarii, Moskva.  
(NEWCASTLE DISEASE--MICROBIOLOGY) (TISSUE CULTURE)

ANDREYEV, A.I.; SHISHKINA, Ye.Ya., veterin.vrach; GULIYEV, M.A., veterin.vrach;  
DUBAKIN, N.I.; FOMINA, A.Ya., kand.veterin.nauk; SOKKAR, I.M.Kh.,  
aspirant; KUZ'MIN, V.V., prof.; TSYGENBORD, O.A., veterin.vrach

Laboratory practice. Veterinariia 40 no.7:66-76 Jl '63.  
(MIRA 16:8)

1. Direktor Akhtyrskoy mezhrayonnoy veterinarnoy laboratorii, Sumskaya  
obl. (for Andreyev).
2. Vsesoyuznyy institut eksperimental'noy  
veterinarii (for Shishkina, Fomina, Sokkar).
3. Respublikanskaya  
veterinarnaya laboratoriya Gruzinskoy SSR (for Gulyev).
4. Moskovskaya oblastnaya veterinarnaya laboratoriya (for Dubakin).
5. Leningradskiy veterinarnyy institut (for Kuz'min, TSygenbord).  
(Veterinary medicine)

BULGARIA

FOMINA, A. Ya., and SOKAR, I. M. Kh, VIEV, [Abbreviation not identified,]  
Moscow, [USSR.]

"Comparative Studies of Hemagglutinating and Antigenic Properties of Some  
Atypical and Classical Strains of Newcastle Disease Virus."

Sofia, Veterinarna Sbirka, Vol 60, No 6, 1963; pp 4-6.

Abstract: Serologic studies with 3 vaccinal and 4 virulent strains of  
Newcastle Disease: erythrocyte agglutination studies of cells of hens,  
pigeons, turkeys, guinea hens, ducks; guinea pigs, mice, dogs, sheep,  
horses; frogs. All avian erythrocytes could be agglutinated; also those  
of mice and frogs to a lesser extent; not of mammals other than mice.  
Actual results varied with strain and animal, as shown in 2 graphs and  
table. Viral strains can be easily identified by their serologic reactions.

1/1

ZOKHAR, G.A.; KAGOMIYU, V.G.

Physicochemical properties of graphite-carbon materials. Konstr.

anglegraf. mat. no. 1:106-169 '64.

(MIRA 17:11)

PAKHOTINA, N.S.; LEBEDEVA, K.V.; SOKLAKOV, A.F.

Possibility of using the SHB-1 "Lepestok" respirator in nonferrous metallurgical enterprises. Zdrav. Kazakh. 22 no.2:61-63 '62.  
(MIRA 1514)

1. Iz Ust'-Kamenogorskogo otdeleniya Instituta krayevoy patologii AN Kazakhskoy SSR i otdela tekhniki bezopasti Ust'-kamenogorskogo svintsovo-tainkovogo kombinata imeni V.I.Lenina.  
(RESPIRATORS) (METALLURGY—HYGIENIC ASPECTS)

SOKLAKOV, A.; NESTERENKO, I.

Facts, events, people. Kryl.rod. 13 no.12:12-13 D '62.  
(MIRA 16:2)

1. Zamestitel' nachal'nika Moskovskogo oblastnogo aerokluba  
(for Soklakov). 2. Zamestitel' nachal'nika otdela upravelniya  
perevozok Aeroflota (for Nesterenko).  
(Aeronautics)

70-3-3-26/36

AUTHORS: Zhdanov, G.S., Zhuravlev, N.N., Kuz'min, R.N. and  
Soklakov, A.I.

TITLE: The Establishment by X-ray Crystallography of a New Compound  
 $Bi_3Rh$  in the System Bi-Rh (Rentgenograficheskoye ustanov-  
leniye novogo soyedineniya  $Bi_3Rh$  v sisteme Bi-Rh)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 3, pp 373 - 374  
(USSR).

ABSTRACT:  $Bi_4Rh$  has been supposed to occur in three polymorphic modifications  $\alpha$ ,  $\beta$  and  $\gamma$ . Goniometric and X-ray observations have been made on  $\beta$ - $Bi_4Rh$ . Its habit is identical with that of  $Bi_3Ni$  and its cell dimensions  $a=9.1$ ,  $b=4.2$ ,  $c=11.4$  Å are close to those of  $Bi_3Ni$  ( $a=8.875$ ,  $b=4.115$ ,  $c=11.477$ ). Both have the space group  $Pnma = D_{2h}^{16}$ .  $d_{obs.} = 10.7 \pm 0.2$  gm/cm<sup>3</sup>. gives  $Z$  nearly equal to 3 if the formula  $Bi_4Rh$  is used. It seems clear that the formula should be  $Bi_3Rh$  giving  $Z=4$  and powder photographs also confirm this Card1/2 resemblance to  $Bi_3Ni$ .

70-3-3-26/36

The Establishment by X-ray Crystallography of a New Compound  $Bi_3Rh$   
in the System Bi-Rh

There are 7 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet  
imени M.V. Lomonosova (Moscow State University  
imени M.V. Lomonosov)

SUBMITTED: July 11, 1957

Card 2/2

54130 1043, 1273, 1228

23075  
S/078/61/006/006/001/013  
B110/B206

AUTHORS: Soklakov, A. I., Illarionov, V. V.

TITLE: Mixed sulfur-selenium molecules in condensed phases

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 6, no. 6, 1961, 1261-1263

TEXT: When investigating saturated vapors over liquid sulfur-selenium solutions, an extremely high volatility (activity coefficient between 200 and 300) was established in the concentration range < 0.01 Se atom part. This is explained by the formation of mixed molecules with replacement of S-atoms or S-groups by selenium, since the molecular states of both are close to each other, and the total density of their saturated vapors is not additive. These molecules must already exist in the liquid phase. After a survey on the modifications of sulfur, the authors' own experimental results are given. In order to clarify the structure of the S-Se mixed molecules (chain- or ring structure), the selenium distribution at low concentration among the different sulfur molecules in melts was investigated. The higher the temperature, the more vigorously the Se inclusion takes place independently of the Se concentration. The molecular

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X

23075

Mixed sulfur-selenium molecules in ...

S/078/61/006/006/001/013  
B110/B206

X

formations are conserved by quick cooling. The  $S_{\mu}$ , insoluble in carbon disulfide, can easily be separated by extraction, the separation of  $S_{\lambda}$  and  $S_{\gamma}$  is simple owing to the great temperature dependence of the solubility coefficient of  $S_{\lambda}$ . The following substances were melted: sulfur, purified from selenium, arsenic, and bitumen, distilled 6 times in high vacuum and 2% by weight of selenium tagged with  $\gamma$ -radioactive  $Se^{75}$ , which does not affect the sulfur polymerization. Heating to  $800^{\circ}C$  took place in the electric furnace for 4 hr, and then cooling to  $160^{\circ}C$ . This process was repeated several times to achieve uniform Se distribution. Finally, heating between  $160$  and  $300^{\circ}C$  took place for another 2 hr, then cooling with liquid nitrogen and extracting with  $CS_2$  for 1 hr. During cooling,  $S_{\lambda}$  was separated as orthorhombic modification; the more soluble  $S_{\gamma}$  was obtained during evaporation. The Se content of the individual molecular forms was then determined radiometrically in aqueous caustic soda solutions. In order to ascertain whether mixed eight-membered rings or

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23075

Mixed sulfur-selenium molecules in ...

S/078/61/006/006/001/013  
B110/B206

$S_8$ - or  $Se_8$  rings exist in the solid or liquid phase, the individual crystallization phases of  $S_{\lambda}$  from  $CS_2$  were also investigated. The temperature from which chilling is done, has a decisive effect on the selenium distribution. Thus, the ratio  $S_{\mu} : S_{\lambda} : S_{\pi}$  for samples chilled from  $280\text{--}300^{\circ}\text{C}$  amounts to  $1 : 0.8 : 0.3$ , for those chilled from  $160\text{--}170^{\circ}\text{C}$ , however,  $0.25 : 1 : 0.3$ . The low Se content of  $S_{\pi}$  can probably be explained by incomplete separation of  $S_{\lambda}$  from  $S_{\pi}$ . The samples chilled from  $160\text{--}300^{\circ}\text{C}$  contained strongly radioactive  $S_{\mu}$ , those chilled from temperatures close to  $160^{\circ}\text{C}$  weakly radioactive  $S_{\mu}$ . The selenium inclusion thus took place more easily at high temperature. Since no temperature effect on the radioactivity could be established in  $S_8$  rings, these cannot contain selenium. During crystallizing of the  $\lambda$ -modification, strong activity was established first and then a decreasing one. The fast precipitation of selenium involved here can only

Card 3/5

Mixed sulfur-selenium molecules in ...

S/078/61/006/006/001/013  
B110/B206

take place in the absence of mixed cyclic molecules. Moreover, pycnometric density measurements of the individual crystallization phases of  $S_8$  were made. The experimental results have confirmed the original ones. The distribution character of selenium did not change up to 20% by weight of Se in the sample. Since the  $Se_8$  rings are soluble in  $CS_2$  only to a certain degree, they are quickly separated at a 20% by weight content of Se. The crystal density dropped from  $2.45\text{ g/cm}^3$  at the start of crystallization, to  $2.07\text{ g/cm}^3$ , which corresponds to a decrease from 35 to 2.5% by weight of Se and seems proof against the existence of  $\lambda$ -mixed molecules. It is probable that other elements which, like selenium, can form the long chains similar to sulfur molecule chains, do not produce mixed molecules with the eight-membered sulfur rings up to  $300^\circ\text{C}$ , either. M. N. Stepanov is mentioned. There are 14 references: 5 Soviet-bloc and 9 non-Soviet bloc. The reference to the English-language publication reads as follows: Ref. 7: G. Gee; Sci. Progr., 43, 193 (1955).

Card 4/5

23075

S/078/61/006/006/001/013  
B110/B206

Mixed sulfur-selenium molecules in ...

ASSOCIATION: Nauchnyy institut udobreniy i insektofungitsidov im.  
Ya. V. Samoylova (Scientific Institute of Fertilizers,  
Insecticides and Fungicides imeni Ya. V. Samoylov )

SUBMITTED: April 28, 1960

Card 5/5

ILLARIONOV, V.V.; SOKLAKOV, A.I.; KIL'DISHEVA, Ye.V.

Phase diagrams of the systems  $V_2O_5-K_3PO_4$  and  $V_2O_5-K_4P_2O_7$ .  
(MIRA 14:11)  
Zhur.neorg.khim. 6:1355-1360 Je '61.

1. Nauchnyy institut udobreniy i insektofungisidov im. Ya.V.  
Samoylova.  
(Systems (Chemistry))

SOKLAKOV, A.I.; ILLARIONOV, V.V.; VOL'FKOVICH, S.I.; REMIN, R.Ye.

X-ray study of products of the hydrothermal decomposition of  
phosphorites in the Kara-Tau. Rent.min.syr. no.1:146-148 '62.  
(MIRA 16:3)

1. Nauchno-issledovatel'skiy institut po udobreniyam i  
insektofungisidam imeni Ya.V.Samoylova.  
(Kara-Tau--Phosphorite) (X-ray crystallography)

S/070/62/007/004/003/016  
E132/E435

AUTHORS: Zhdanov, G.S., Soklakov, A.I.  
TITLE: X-ray investigation of the radial distribution in  
amorphous solid solutions S-As<sub>2</sub>S<sub>3</sub>  
PERIODICAL: Kristallografiya, v.7, no.4, 1962, 555-559  
TEXT: Evaporated layers were obtained by heating elementary As  
and S to 900°C for several hours. Specimens were prepared with  
0.5, 1, 4, 5, 10 and 15 at.% As. They were examined by  
diffractometer YPC-50M (URS-50I) using a monochromator of  
pentaerithritol and Cu radiation. The maximum count rate from  
the specimen was about 14000 counts/min. The decay of the  
amorphous phase and the appearance of the crystalline one was  
followed by heating the specimen to 110°C. The scattering  
curves were inverted to give the radial density curves by the  
computer "Strela". Discussion of these curves leads to a model  
of the process. Spiral chains are envisaged as proposed by  
Prins for amorphous S. As stabilizes these chains by forming  
cross links between them but at the same time favours the  
formation of crystalline regions. If there is less than one atom  
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E132/E435

X-ray investigation ...

of As per turn of the spiral then the structure remains plastic; this is up to 10 - 12% As, the As atoms appear not to interact with each other. Above 12%, the material becomes more rigid and, on annealing, tends towards the structure of amorphous  $As_2S_3$ . The results obtained agree with measurements of the viscosity of melts of S + As. There are 4 figures and 1 table.

ASSOCIATIONS: Moskovskiy gosudarstvennyy universitet  
im. M.V.Lomonosova (Moscow State University imeni  
M.V.Lomonosov)  
Nauchnyy institut udobreniy i insektofungisidov  
im. Ya.V.Samoylova (Scientific Institute for  
Fertilisers and Insecto-Fungicides imeni  
Ya.V.Samoylov)

SUBMITTED: September 14, 1961

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SOKLAKOV, A. I.; ZHDANOV, G.S.

X-ray diffraction study of radial distributions in amorphous solid solutions  
in the system sulfur -  $P_4S_{10}$ . Kristallografiia 7 no.6:882-885 N-D '62.  
(MIRA 16:4)

1. Nauchnyy institut udobreniy i insektofungisidov imeni Ya.V.Samoylova  
i Moskovskiy gosudarstvennyy universitet imeni Lomonosova.  
(X-ray diffraction examination) (Systems (Chemistry))

VOL'FKOVICH, S.I.; ILLARIONOV, V.V.; REMEN, R.Ye.; SOKLAKOV, A.I.

Synthesis of tricalcium phosphate based on a solid-phase reaction.  
Zhur.prikl.khim. 35 no.6:1165-1167 Je '62. (MIRA 15:7)  
(Calcium phosphates)

VOL'FKOVICH, S.I.; ILLARIONOV, V.V.; REMEN, R.Ye.; SOKLAKOV, A.I.

Concentration region of stability of hydroxylapatite. Zhur.-  
prikl.khim. 35 no.6:1163-1171 Je '62. (MIRA 15:7)  
(Calcium phosphates) (Hydroxylapatite)

SOKLAKOV, A.I.; VOL'FKOVICH, S.I.; ILLARIONOV, V.V.; REMEN, R.Ye.

Effect of magnesium on the hydrothermal treatment of phosphates.  
(MIRA 15:8)  
Zhur.prikl.khim. 35 no.7:1405-1410 J1 '62.  
(Phosphates) (Magnesium)

S/076/62/036/003/007/011  
B101/B108

AUTHOR: Soklakov, A. I. (Moscow)

TITLE: Optical properties of polymeric states of sulfur with P, As,  
Sb, and Bi admixtures

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 3, 1962, 575 - 580

TEXT: A study has been made of the dependence of the shift of the optical absorption edge of plastic sulfur on the content in P, As, Sb, or Bi (up to 12 atom%). The admixtures were dissolved by 6 - 7 hr heating to 900°C in ampoules filled with S. The transmission spectra between 350 and 1100 m $\mu$  were taken with an C $\phi$ -4 (SF-4) quartz spectrograph. Samples with Bi admixtures became intransparent so that no spectra could be taken. The other admixtures produced jumps of the absorption edge (Figs. 3, 4) depending on the type and amount (> 4 atom%) of the admixture and the treatment of the sample (slow cooling or quenching). These jumps are explained by a shift of the equilibrium toward the chain-shaped molecular structure of S, and disappearance of the cyclic S<sub>8</sub>. Small admixtures (0.3 atom%) of Sb and As already lead to a distortion of the structure owing to the great difference

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Optical properties of polymeric ...

in electronegativities and atomic radii of these elements and those of sulfur. There are 4 figures and 18 references: 3 Soviet and 15 non-Soviet. The four most recent references to English-language publications read as follows: J. Van Wazer, *Phosphorus and its compounds*, vol. 1, London, 1958, 290 and 301; G. Gee, *Sci., Progr.*, 43, 193, 1955; D. Gaerdner, G. Fraenkel, *J. Amer. Chem. Soc.*, 78, 3279, 1956; R. Bacon, R. Fanelli, *J. Amer. Chem. Soc.*, 70, 1965, 1948.

ASSOCIATION: Nauchno-issledovatel'skiy institut udobreniy (Scientific Research Institute of Fertilizers)

SUBMITTED: June 16, 1960

Fig. 3. Absorption edge for S - Sb samples with different Sb contents. (1) 4 atom%, slowly cooled; (2) 1 atom%, quenched; (3) 4 atom%, quenched; (4) 3 atom%, quenched; (5) 2 atom%, quenched; ordinate: specific optical density.

Fig. 4. Shift of the absorption edge of sulfur as a function of the P, As, or Sb content. Legend: Ordinate: extrapolated absorption edge;

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SOKLAKOV, A.I.; MEL'NIKOV, S.V.

Electric resistance of sulfur - phosphorus and sulfur-arsenic  
melts. Zhur. fiz. khim. 36 no.6:1339-1341 Je'62 (MIRA 17:7)

1. Nauchnyy institut udobreniy i insektofungisidov imeni Ya.V.  
Samoylova.

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S/020/62/142/002/021/029  
B106/B101

5.3620

AUTHORS: Illarionov, V. V., Mel'nikova, S. V., and Soklakov, A. I.

TITLE: Polysulfides of arsenic and phosphorus

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 2, 1962, 366-369

TEXT: The systems sulfur-arsenic and sulfur-phosphorus were examined in the composition range of 0 - 7 gram-atom per cents of arsenic and phosphorus, respectively, to ascertain whether types of new molecules were formed. Mixtures of sulfur,  $As_2S_3$ ,  $PS_4$   $S_8$   $10$  were heated to  $\sim 900^{\circ}C$  for

6 hrs in evacuated thick-walled quartz ampuls. After cooling, the comminuted ampul content was extracted for 14 hrs with carbon disulfide, whereby the molecular forms with relatively few atoms were dissolved. Both extract and insoluble residue were analyzed on both arsenic and phosphorus. In the sulfur-arsenic system, the arsenic is embedded in long linearly polymerized sulfur molecules. At the same time, the arsenic is bound to low-molecular forms by the reaction of the stable arsenic sulfide with  $S_8$  rings and the short biradicals of the  $\pi$ -form of sulfur. X

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Polysulfides of arsenic and phosphorus

These are dispersed in the bulk of the long linear forms and form a product insoluble in carbon disulfide, owing to network polymerization during extraction. The solid product remaining after the carbon disulfide has been evaporated dissolves only partly on a second extraction with carbon sulfide. The soluble part is almost pure sulfur, while the insoluble part is a sulfide with 25 sulfur atoms per arsenic atom. The insoluble residue after the first extraction contains, regardless of the initial composition of the mixture, about 9 sulfur atoms per arsenic atom. In the sulfur-phosphorus system the sample portion which is soluble in carbon disulfide is much smaller than in the sulfur-arsenic system. The number of sulfur atoms per phosphorus atom in the insoluble portion depends on the initial phosphorus content of the sample. If this content is less than 4 gram-atom per cents, the number of sulfur atoms is 25, but it is only 12 in the case of high phosphorus contents. No insoluble residue is left over from a second extraction with carbon disulfide. X-ray analyses, evaluated with a "Strela" computer at the Vychislitel'nyy tsentr Moskovskogo universiteta (Computer Center of Moscow University) showed that the interatomic distance sulfur-sulfur in the sulfur-arsenic system is about  $2.18 \text{ \AA}$  in the portion remaining after the first extraction,  $\checkmark$

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Polysulfides of arsenic and phosphorus

as against 2.30 Å in the nonextracted mixture. The extraction of the low-molecular forms results in a loose packing which weakens the intermolecular, and strengthens the intramolecular interactions, whereby the interatomic distances sulfur-sulfur are narrowed. The interatomic distance of pure sulfur (2.07 Å) and the distance between sulfur and arsenic (2.30 Å) appear in the insoluble portion after the second extraction due to the polymerization processes of biradical molecules. Part of the sample, which has remained insoluble in the first extraction, is unstable in structure. Already after 24 hrs the distance 2.18 Å disappears, which is probably related to a partial decay of the chain structure and the formation of S<sub>8</sub> molecules. No investigations of this kind were conducted in the sulfur-phosphorus system, since the soluble part of the samples was considerably smaller, and no substantial structural changes of the samples were observed before and after extraction. Academician S. I. Vol'fkovich is thanked for having made the present investigation possible. G. S. Zhdanov is mentioned. There are 2 figures, 2 tables, and 7 references: 1 Soviet and 6 non-Soviet. The three references to English-language publications read as follows: J. van Wazer, Phosphorus and its Compounds, 1, N. Y., 1958, p. 289 and Card 3/4

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S/020/62/142/002/021/029  
B106/B101

Polysulfides of arsenic and phosphorus

p. 301; G. Gee, J. Polymer Sci., 16, 459 (1955).

ASSOCIATION: Nauchno-issledovatel'skiy institut naokreniy i insektofungicidov im. Ya. V. Samoylova (Scientific Research Institute of Fertilizers and Insectofungicides imeni Ya. V. Samoylova)

PRESENTED: July 31, 1961, by S. I. Volkovskiy, Academician

SUBMITTED: July 29, 1961

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